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IN THE MATTER OF THE PROPOSED NET METERING RULES FOR THE PROPOSED RULEMAKING ON NET METERING

Docket No. RE-00000A-07-0608

ARIZONA PUBLIC SERVICE COMPANY'S COMMENTS TO PROPOSED ORDER FOR THE PROPOSED RULEMAKING REGARDING NET METERING

Arizona Public Service Company ("APS" or the "Company") hereby submits Comments to the Arizona Corporation Commission ("Commission" or "ACC") on Staff's Proposed Order in The Matter of Proposed Rulemaking Regarding Net Metering ("Proposed Net Metering Order").

I. Introduction.

On January 4, 2008, APS filed Comments in response to Staff's Request for Written Comments to Proposed Net Metering Rules. On February 1, 2008, Staff revised the Proposed Net Metering Rules, incorporating many of the comments of the interested parties. On February 12, 2008, APS filed comments to Staff's Revised Draft of Proposed Net Metering Rules. On February 21, 2008, Staff filed a Proposed Net Metering Order and the Proposed Net Metering Rules. APS appreciates Staff's efforts in this matter and taking into consideration all interested parties comments in drafting the latest version of Proposed Net Metering Rules, but APS still has several concerns as described herein.

II. Comments on Proposed Net Metering Rules

Upon review of the Proposed Net Metering Rules, APS reiterates its previous concerns of defining a net metering facility to include facilities that use non-renewable fuel, and allowing such facilities to be sized up to 125% of the net metering customers connected load or peak demand. Specifically, APS continues to express concerns that: (1)

the definition of Combine Heat and Power ("CHP") as proposed and included in the definition of Net Metering Facility pursuant to R-14-2-2302.M.3, will include non-renewable fueled systems (i.e., natural gas and diesel) in the net metering program, which would be contrary to the usual intent and purpose of net metering; and (2) by allowing facilities to be sized up to "125% of customers total connected load" (R-14-2-2302.M.4) or "125% of customers peak demand" (R14-2-2303.B), could cause the utility to incur unnecessary expenses to increase the capacity of its local distribution system to allow generation output to the utility grid during low load periods, or at a minimum, could create electrical overload on the existing facilities; and (3) interconnection must comply with the interconnection requirements established from Docket No. E-00000A-99-431, In the Matter of Interconnection of Distributed Generation Facilities in the Generic Investigation of Distributed Generation and the proposed rulemaking ordered by Decision No. 69674 in that docket.

1. Net Metering Facilities should be limited to renewable generation.

APS supports a properly designed net metering program. By properly designed, APS means a program that (1) encourages distributed renewable generation; and (2) allows recovery of costs to provide service. Because the Proposed Net Metering Rules should be designed and developed to promote renewable resources, APS opposes the definition of CHP as proposed and included in the definition of Net Metering Facility pursuant to R-14-2-2302.M.3, because it would also allow for the subsidization of non-renewable energy (e.g. natural gas, diesel) under the guise of net metering.

APS recommends that the Commission either remove CHP in its entirety from the definition of Net Metering Facility contained in R-14-2-2302.M.2, or modify the definition to be consistent with the Renewable Energy Standard and Tariff, R14-2-1802(B)(5), which defines Renewable Combined Heat and Power or RCHP as: ". . . a Distributed Generation system, fueled by an Eligible Renewable Energy Resource, that

produces both electricity and useful renewable process heat." If the Commission is inclined to allow non-renewable facilities to be included in net metering, at a minimum, APS recommends that the Commission require that all eligible CHP systems be required to meet all PURPA standards for efficiency and effective utilization of heat production otherwise applicable to a Qualifying Facility.

2. Sizing of Net Metering Facilities

APS would suggest that 100% be used instead of 125% of peak demand when determining the maximum generation capacity to qualify for net metering service. A review of the Proposed Rules reveals a revision to section R-14-2-2302.M.4, in which the term "peak demand" was replaced with the term "total connected load" as the qualifying criteria for a Net Metering Facility. "Total connected load" had been removed from an earlier draft of the net metering rules at the request of several interested parties including APS. The concern was that total connected load is a number difficult to determine with any precision and the term was replaced by "peak demand" in the net metering rule definition version issued February 1, 2008. This latest language change creates a discrepancy between the language of section R-14-2-2302.M.4 and the language of section R-14-2-2303.B, which retains the term peak demand as the qualifying criteria. APS proposes replacing the terms "total connected load" with "peak demand" in R-14-2-2302.M.4, to provide for consistency between the two sections.

In addition, although APS designs its distribution facilities to serve the customers expected peak demand, customers expected peak demand (load) can often be 50% or less than the customers total connected load. It is invariably less than 100% of connected load (which itself can be difficult to determine). Allowing a generating facility to be sized up to 125% of the peak demand or total connected load could require the utility to increase the capacity or could cause electrical overload as described above. It is more appropriate to limit customer's generation to no more than 100% of the customer's expected peak demand. This would allow sizing of the local distribution system to be consistent

regardless of whether or not the customer had or later acquired a generating facility. To do otherwise could require additional distribution investment to interconnect the customer.

As an example, assume a customer has a 500 kW expected peak demand. The Company would typically size its transformer to serve this load with a 750 kVA transformer. It is not uncommon for a customer's actual peak demand to be in the range of 50% of its total connected load. One measure of connected load could be the equivalent demand of a customer's facility if the customer turned on every electrical device within its facility. For this customer, the connected load would then be 1000 kw. Therefore, allowing sizing a generator at 125% of the connected load would result in a generator rated at 1250 kW. Assuming the night time load on this customer drops to less than 100 kW, the peak power flow back onto the grid could be over 1100 kW, therefore requiring a transformer rated 1500 kVA, rather than 750 kVA. This would result in an increased cost of local construction of approximately 150% of the normal cost to serve this customer.

Finally, there should be language in the Proposed Net Metering Rules that provides that interconnection must comply with the interconnection requirements as described above. Attachment A is a redline version of the Proposed Net Metering Rules with APS' recommended revisions.

RESPECTFULLY submitted this 6th day of March, 2008.

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Attachment A

Proposed Net Metering Rules

ARTICLE 23. NET METERING

R14-2-2301. Applicability

These Rules govern the treatment of Electric Utility Customers in Arizona who wish to interconnect with the Electric Utility which serves them and engage in Net Metering operation as defined below. These Rules apply to all Electric Utilities, as defined in these Rules.

R14-2-2302. Definitions

For purposes of this Article, the following definitions apply unless the context requires otherwise:

A. "Avoided Costs" means the incremental costs to an Electric Utility for electric energy or capacity or both which, but for the purchase from the net metering facility, such utility would generate itself or purchase from another source.

B. "Biomass" means any raw or processed plant-derived organic matter available on a renewable basis, including dedicated energy crops and trees; agricultural food and feed crops; agricultural crop wastes and residues; wood wastes and residues, including landscape waste, right of way tree trimmings, or small diameter forest thinnings that are 12 inch in diameter or less; dead and downed forest products; aquatic plants; animal wastes; other vegetative waste materials; non-hazardous plant matter waste material that is segregated from other waste; forest related resources such as harvesting and mill residue, pre-commercial thinnings, slash and brush; miscellaneous waste such as waste pellets, crates, and dunnage; or recycled paper fibers that are no longer suitable for recycled paper production, but not including painted, treated or pressurized wood, wood contaminated with plastics or metals, tires or recyclable post-consumer waste paper.

C. "Biogas" means gases that are derived from plant-derived organic matter, agricultural food and feed matter, wood wastes, aquatic plants, animal wastes, vegetative wastes or waste water treatment facilities using anaerobic digestion or from municipal solid waste through a digester process, an oxidation process or other gasification process.

D. ~~"Combined Heat and Power" of "CHP" (also known as cogeneration) means a system that generates electricity and useful thermal energy in a single, integrated system.~~ "Commission" means the Arizona Corporation Commission.

E. "Electric Utility" or "Utility" means an electric distribution company that constructs, operates, and maintains the electrical distribution system for the receipt and/or delivery of power.

F. "Electric Utility Customer" or "Customer" means an end-use retail Customer served under a Utility's rate schedule.

G. "Fuel Cell" means a device that converts the chemical energy of a fuel directly into electricity without intermediate combustion or thermal cycles. For purposes of these Net Metering rules, the source of the chemical reaction must be derived from Renewable Resources.

H. "Geothermal" means heat from within the earth's surface.

I. "Hydroelectric" means the kinetic energy derived from moving water.

J. "Net Metering" means service to an Electric Utility Customer under which electric energy generated by or on behalf of that Electric Utility Customer from a Net Metering Facility and delivered to the Utility's local distribution facilities may be used to offset electric energy provided by the Electric Utility to the Electric Utility Customer during the applicable billing period.

K. "Net Metering Customer" means any Arizona Customer who chooses to take electric service in the manner described in the definition of Net Metering above, and under the Net Metering tariff, as described in R14-2-2307.

L. "Net Metering Facility" means a facility for the production of electricity that:

1. Is operated by or on behalf of a Net Metering Customer and is located on the Net Metering Customer's premises.
2. Is intended primarily to provide part or all of the Net Metering Customer's requirements for electricity;

3. Uses Renewable Resources, a Fuel Cell, or ~~CHP~~RCHP to generate electricity;
4. Has a generating capacity less than or equal to ~~125%~~100% of the Net Metering Customer's expected peak demand~~total connected load~~, or in the absence of customer load data capacity less than or equal to 100 kW; and
5. Is interconnected with and can operate in parallel and in phase with an Electric Utility's existing distribution system.

M. "Renewable Resources" means natural resources that can be replenished rapidly by natural processes. Renewable Resources include Biogas, Biomass, Geothermal, Hydroelectric, Solar, or Wind.

N. "RCHP" or "Renewable Combined Heat and Power" (also known as cogeneration) means a distributed generation system, fueled by an Eligible Renewable Energy Resource, that produces both electricity and useful renewable process heat. Qualifying RCHP systems shall meet all PURPA efficiency and effective utilization of heat production standards for a Qualifying Facility certification.

O. "Solar" means solar radiation or heat from the Earth's Sun that produces electricity from a device or system designed for that purpose.

P. "Wind" means energy derived from wind movement across the Earth's surface that produces electricity from a device or system designed for that purpose.

R14-2-2303. Requirements and Eligibility

A. An Electric Utility shall interconnect with any retail Customer who operates a Net Metering Facility in the Electric Utility's service territory.

B. Facilities with a generating capability greater than ~~125%~~100% of the customer's peak demand shall require a special contract between the Utility and the Customer.

C. Interconnection must be in accordance with the Commissions interconnection requirements and Rules for Distributed Generation.

RI4-2-2304. Metering

If the meter that is currently installed on the Net Metering Facility is incapable of registering and accumulating the kilowatt-hours ("kWh") of electricity flowing in both directions in each billing period, a bi-directional meter with that capability shall be installed by the Electric Utility to record the kWh of electricity in both directions.

RI4-2-2305. New or Additional Charges

A. Any proposed charge that would increase a Net Metering Customer's costs beyond those of other customers in the same rate class shall be filed by the Electric Utility with the Commission for approval. The filings shall be supported with cost of service studies and benefit/cost analyses.

B. Net Metering costs shall be assessed on a nondiscriminatory basis with respect to other customers with similar load characteristics.

R14-2-2306. Billing for Net Metering

A. On a monthly basis, the Net Metering Customer shall be billed or credited based upon the rates applicable under the Customer's currently effective standard rate schedule and any appropriate rider schedules.

B. The billing period for net metering will be the same as the billing period under the Customer's applicable standard rate schedule.

C. If the kWh supplied by the Electric Utility exceed the kWh that are generated by the Net Metering Facility and delivered back to the Electric Utility during the Billing Period, the Customer shall be billed for the net kWh supplied by the Electric Utility in accordance with the

rates and charges under the Customer's standard rate schedule.

D. If the electricity generated by the Net Metering Customer exceeds the electricity supplied by the Electric Utility in the Billing Period, the Customer shall be credited during the next Billing Period for the excess kWh generated. That is, the excess kWh during the Billing Period will be used to reduce the kWh supplied (not kW or kVA demand or customer charges) and billed by the Electric Utility during the following Billing Period.

E. Customers taking service under time-of-use rates who are to receive credit in a subsequent Billing Period for excess kWh generated shall receive such credit during the next Billing Period during the on- or off-peak periods corresponding to the on- or off-peak periods in which the kWh were generated by the Customer.

G. Once each calendar year the Electric Utility shall issue a check or billing credit to the Net Metering Customer for the balance of any credit due in excess of amounts owed by the Customer to the Electric Utility. The payment for any remaining credits shall be at the Electric Utility's Avoided Cost. That Avoided Cost shall be clearly identified in the Electric Utility's Net Metering tariff

R14-2-2307. Net Metering Tariff

A. Each Electric Utility shall file, for approval by the Commission, a Net Metering tariff within 120 days from the effective date of these rules, including financial information and supporting data sufficient to allow the Commission to determine the Electric Utility's fair value for the purposes of evaluating any specific proposed charges. The Commission shall issue a decision on these filings within 120 days.

B. The Net Metering tariff shall specify standard rates for annual purchases of remaining credits from Net Metering Facilities and may specify capacity limits. If capacity limits are included in the Tariff, such limits must be fully justified using appropriate loads and resource data.

C. Electric utilities may include seasonally and time of day differentiated avoided cost rates for purchases from Net Metering Customers, to the extent that Avoided Costs vary by season and time of day.

R14-2-2308. Filing and Reporting Requirements

A. Prior to May 1 of each year, each Electric Utility shall file a report listing all existing Net Metering Facilities and the inverter power rating or generator rating as of the end of the previous calendar year.

B. Also included in this report shall be, for each existing Net Metering Facility, the monthly peak demand delivered to and from the Electric Utility and the monthly amount of energy delivered to and from the Utility.